

# Cover Letter

Irakli Chakaberia  
Kansas State University

July 25, 2013

## Postdoctoral Position Johns Hopkins University - CMS Experiment

Dear Dr. Gritsan,

I am a PhD student at the Kansas State University in the final phase of my studies. Since 2007 I have been working on the CMS experiment and have acquired experience with its hardware, software and data analysis techniques. In my thesis analysis I study the angular distribution of the  $Z\gamma$  production at the LHC, which is somewhat similar to the analysis methods Johns Hopkins group is using for the Higgs boson analysis. I believe my analysis skills and experience make me a strong and uniquely qualified candidate to contribute and lead the efforts of your group. I am a big believer that there is a better description of the physics still to be discovered, and that the clues to it may be found through the electroweak interaction, which, in spite of the numerous precision measurements, is open to many new ways to be probed.

I have strong software and programming skill, which are indivisible part of the modern particle physics data analysis. The advantage in programming skills translates into more robust, reliable and accurate physics results without relying on the third party, black box software. I have developed the CMS online monitoring tools as part of the WebBased Monitoring team. Further, I have supervised the offline DQM shifts and conducted the trainings for the shift-takers. In addition, I have experience with the commissioning and calibration of the CMS pixel detector, as well as hardware development for the pixel detector upgrade.

I believe, the skills and experience I have summarized above make me a strong candidate for the postdoctoral position at the Johns Hopkins University.

The following referees will provide the recommendation letters:

- **Dr. Tim Bolton** - Kansas State University : [bolton@phys.ksu.edu](mailto:bolton@phys.ksu.edu)
- **Dr. Danek Kotlinski** - Paul Scherrer Institute : [danek.kotlinski@psi.ch](mailto:danek.kotlinski@psi.ch)
- **Dr. Kaori Maeshima** - Fermilab : [maeshima@fnal.gov](mailto:maeshima@fnal.gov)

I look forward to hearing from you. Please, feel free to contact me if you need any additional information.

Sincerely,

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